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PATENTS

Attorney Docket No. UV-56

Applicants : Edward B. Knudson et al.
For : SERIES REMINDERS AND SERIES RECORDING FROM AN
INTERACTIVE TELEVISION PROGRAM GUIDE
Hon. Assistant Commissioner
for Patents
Washington, D.C. 20231

TRANSMITTAL LETTER FOR UNEXECUTED
ORIGINAL PATENT APPLICATION

Sir:

Transmitted herewith for filing are the
[X] specification; [X] claims; [X] abstract; [X] unexecuted
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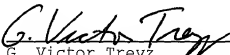
[] Formal drawings.

[X] Informal drawings. Formal drawings will be filed
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BASIC FEE				\$ 760.00
TOTAL CLAIMS	254 - 20 = 234		x \$18 =	\$4212.00
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G. Victor Treyz
Registration No. 36,294
Attorney for Applicants
c/o FISH & NEAVE
1251 Avenue of the Americas
New York, New York 10020-1104
Tel.: (212) 596-9000

SERIES REMINDERS AND SERIES RECORDING FROM
AN INTERACTIVE TELEVISION PROGRAM GUIDE

This application claims the benefit of United States provisional application No. 60/088,888 filed
5 June 11, 1998.

Background of the Invention

This invention relates to interactive television program guides, and more particularly, to interactive television program guides with program
10 series reminder and recording capabilities.

Cable, satellite, and broadcast television systems provide viewers with a large number of television channels. Viewers have traditionally consulted printed television program schedules to
15 determine the programs being broadcast at a particular time. More recently, interactive television program guides have been developed that allow television program information to be displayed on a viewer's television.

20 Interactive program guides are typically implemented on set-top boxes. Such program guides allow users to view television program listings in different display formats. For example, a user may instruct the program guide to display a grid or table

of program listings organized in a channel-ordered or a time-ordered list. Users may also search and sort program listings by genre (e.g., movies, sports, etc.) or by title (i.e., alphabetically). A user may obtain
5 additional information for a program by placing a highlight region on a desired program listing and pressing an "info" button.

Program guide data such as program listings, pay-per-view program purchasing information,
10 promotional information, etc. is provided to users' set-top boxes with a data distribution system. Program guide data is typically stored in a central program guide database. Program guide data from the central database is transmitted to the headend facilities of
15 various cable systems. Each headend distributes the program guide data to the set-top boxes in its system.

Some systems allow the user to set reminders to notify the user when certain television programs are to be aired. In such systems, when a user sets a
20 reminder, the program guide will notify the user just prior to when the program is scheduled to be aired or automatically cause the system to tune to the program as it begins airing. However, if the user watches the same program each week and wishes to be notified with a
25 reminder each time the program airs, a new reminder typically must be set by the user each time.

Some systems allow the user to select a program for recording by placing the highlight region on a program listing and pressing a "record" button.
30 Moreover, the user may be able to schedule an upcoming program for recording. In such systems, when a user has scheduled a program to be recorded, the program

guide may automatically cause the system to tune to the program as it begins airing, send a record command to a videocassette recorder to begin recording the program, and then stop the videocassette recorder from recording at the end of the program. The system may allow the user to record a program once, daily, weekly, or just weekdays. However, in order for the system to correctly record a program in a series each time it airs, the program must air at the same time and channel. If the program airs at a different channel or time, or if the user wishes to change the scheduled time or channel of recording, the programs in the series may not be recorded properly.

It is therefore an object of the present invention to provide an interactive television program guide system with program series reminder and recording capabilities.

Summary of the Invention

This and other objects of the invention are accomplished in accordance with the principles of the present invention by providing an interactive television program guide with series reminder and series recording capabilities.

Program guide data is generally available in a data source of a main facility. The main facility provides data from the data source to multiple television distribution facilities via communications links. The data transmitted by the main facility to the television distribution facilities typically include at least television program listings data such as program times, channels, titles, ratings,

categories, and descriptions. In addition, television program listings data may include information indicating whether the program is an episode of a program series and if the program is a new episode or a rerun.

Each television distribution facility distributes the television program listings data to multiple users via communications paths. Each user has user television equipment for displaying the television program listings information. The communications paths preferably have sufficient bandwidth to allow the television distribution facility to distribute multiple channels of television programming to the user television equipment.

The user television equipment that receives and processes the television program listings data from the television distribution facility may include a set-top box and a videocassette recorder. The set-top box may display television program listings on the user's display screen in the form of an interactive grid or list if desired. The user can interact with the television program guide by entering commands via a user input interface. An illustrative user input interface is an infrared remote control with arrow keys, a "guide" button, a "record" button, an "info" button, and various other keys.

When the user presses "guide," a grid or list is displayed that contains television program listings. For example, the program listings may be displayed in a grid format organized in channel order from top to bottom and by broadcast time from left to right. The user may scroll through the listings to locate programs

at different times in the day or different days in the week using the arrow keys. The user can also position a highlight region on the desired entry by using the arrow keys.

5 If a user selects a program or pay-per-view event from the program listings, the user may set a reminder, which directs the system to generate a reminder message just before the scheduled broadcast time of the selected program to remind the user of the
10 selected program. The user may schedule the program to be recorded on the videocassette recorder. The program guide may direct the set-top box to initiate recording of the program at the proper time. Recording a program in this way causes the set-top box to send a record
15 command over a control path to the videocassette recorder.

 When a user orders a reminder or schedules a recording, the system will determine if the selected program is an episode of a program series. If the
20 selected program is not an episode of a series, the system will allow the user to order a reminder or schedule a recording for that single broadcast. If the selected program is an episode of a series, the program automatically presents the user with an opportunity to
25 set a reminder or schedule a recording for that single episode or to set a reminder or schedule a recording for each episode of the series. In addition, other options may be provided that allow the user to determine, for example, whether to schedule
30 reminders/recordings for episodes on all channels on which the program airs or only on the selected channel, whether to schedule reminders/recordings for all

episodes including reruns or only new episodes, and whether to schedule reminders/recordings for episodes on all days or only on the selected day of the week. Moreover, other options may be provided that allow the user to schedule recordings for episodes that have not been recorded in the past or to set reminders for episodes that have not been viewed by the user in the past.

Before the scheduled broadcast time of each episode of each selected program series, the system sends a reminder message to the user that reminds the user of the program episode or sends a record command to the videocassette recorder or otherwise initiates recording of the episode.

The user may also view a list of all currently requested program reminders. Information such as the program name, type of program reminder, and the date and time the request was submitted may be displayed in the list for each reminder. The list may also indicate whether the entry represents a single program broadcast (a one-time reminder) or an episode of a program series. The list may also indicate whether or not the program is a rerun.

The user may view a list of all currently scheduled program recordings. Information such as the program name, the date and time the request was submitted, the date, time, channel, and length of the recording, and whether the scheduled entry represents a single program or an episode of a program series may be displayed for each entry.

Entries may be added to either the program reminder list or recording list as soon as the user

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If the user sets a reminder that conflicts with an existing reminder, the system may inform the user of the conflict. The system may issue multiple reminders. If desired, the user may be provided with an opportunity to resolve conflicts between reminders by allowing the user to select preferred reminders. However, systems having a single videocassette recorder used for recording and because a videocassette recorder can only record a single program at a time, scheduled recording conflicts should be resolved. Recording conflicts may be resolved in several ways. Recording conflicts may, for example, be resolved automatically by the system based on specified user preferences. The user may resolve conflicts directly as soon as the conflicts are detected. The system may allow the user

to resolve any conflicts immediately or at a later, more convenient time. Alternatively, if the system provides for simultaneous recordings, the system may not inform the user of the conflict or provide the user
5 with an opportunity to resolve the conflict.

Further features of the invention, its nature and various advantages will be more apparent from the accompanying drawings and the following detailed description.

10 Brief Description of the Drawings

FIG. 1 is a schematic block diagram of an illustrative system in accordance with the present invention.

FIG. 2 is a schematic block diagram of
15 illustrative user television equipment in accordance with the present invention.

FIG. 3 is a generalized schematic block diagram of portions of the illustrative television equipment of FIG. 2.

20 FIGS. 4 and 5 are illustrative program guide display screens in accordance with the present invention.

FIG. 6 is an illustrative detailed remind/record display screen in accordance with the
25 present invention.

FIG. 7 is an illustrative reminder screen that allows the user to enter information for setting reminders in accordance with the present invention.

FIG. 8 is an illustrative information screen
30 that allows the user to enter more information when

setting reminders in accordance with the present invention.

FIG. 9 is a diagram of an illustrative reminder displayed on the user's television screen in
5 accordance with the present invention.

FIG. 10 is a diagram of an illustrative reminder screen listing all current reminders in accordance with the present invention.

FIG. 10a is an illustrative reminder screen
10 that allows the user to view, update, or cancel reminders in accordance with the present invention.

FIG. 11 is an illustrative recording screen that allows the user to enter information for scheduling recordings in accordance with the present
15 invention.

FIG. 12 is a diagram of an illustrative recording screen listing all currently scheduled recordings in accordance with the present invention.

FIG. 12a is an illustrative recording screen
20 that allows the user to view, update, or cancel recordings in accordance with the present invention.

FIG. 13 is a diagram of an illustrative reminder screen listing all current reminders and detected conflicts in accordance with the present
25 invention.

FIG. 14 is a diagram of an illustrative recording screen listing all currently scheduled recordings and detected conflicts in accordance with the present invention.

FIGS. 15 and 16 are illustrative recording
30 screens that allow the user to resolve recording conflicts in accordance with the present invention.

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FIG. 17 is a diagram showing the interrelationships between various program guide display screens that may be selected in accordance with the present invention.

5 Detailed Description of the Preferred Embodiments

 An illustrative system 10 in accordance with the present invention is shown in FIG. 1. Main facility 12 provides data from data source 14 to television distribution facility 16 via communications
10 link 18. Link 18 may be a satellite link, a telephone network link, a cable or fiber optic link, a microwave link, a combination of such links, or any other suitable communications path. If it is desired to transmit video signals over link 18 in addition to data
15 signals, a relatively high bandwidth link such as a satellite link may generally be preferable to a relatively low bandwidth link such as a telephone line. Television distribution facility 16 may be a cable system headend, a broadcast distribution facility, a
20 satellite television distribution facility, or other such suitable data distribution facility.

 Only one such television distribution facility 16 is shown in FIG. 1 to avoid overcomplicating the drawings. In general, however,
25 main facility 12 distributes data to many such television distribution facilities in parallel. For clarity, the present invention will be described primarily in the context of a single television distribution facility 16.

30 The data transmitted by main facility 12 to television distribution facility 16 includes television

program listings data (e.g., program times, channels, ratings, program categories, titles, and descriptions of individual programs, episodes of series, or entire series). In addition, television program listings data
5 may include information indicating whether a given program is a single broadcast or an episode of a program series. The data may also include information whether a given program is a new first-run episode or is a rerun and whether a given program is a network or
10 syndicated episode.

Television distribution facility 16 distributes the television program listings data to multiple users via communications paths 20. Each user has user television equipment 22 for displaying the
15 television program listings information with an interactive television program guide implemented on user television equipment 22. Communications paths 20 preferably have sufficient bandwidth to allow television distribution facility 16 to distribute
20 television programming to user television equipment. If desired, the television programming or data may be provided over separate communications paths.

An illustrative arrangement for user television equipment 22 is shown in FIG. 2. User
25 television equipment 24 of FIG. 2 receives video and data from television distribution facility 16 (FIG. 1) at input 26. During normal television viewing, the user tunes set-top box 28 to a desired television channel. The signal for that television channel is
30 then provided at video output 30 either as a radio-frequency (RF) signal on a predefined channel (e.g., channel 3 or 4) or as a demodulated video signal or

digital signal. The video signal at output 30 may be received by videocassette recorder 32, so that the user may record programs. Program recording and other features may be controlled by set-top box 28 using
5 control path 34. A typical control path 34 involves the use of an infrared transmitter coupled to the infrared receiver in videocassette recorder 32 that normally accepts commands from a remote control such as remote control 40. Remote control 40 may be used to
10 control set-top box 28, videocassette recorder 32, and television 36.

Television 36 receives radio-frequency or demodulated video signals or digital signals from videocassette recorder 32 or set-top box 28 via
15 communications path 38. The video signals on communications path 38 may either be generated by videocassette recorder 32 when playing back a prerecorded videocassette or may be passed through videocassette recorder 32 from set-top box 28. During
20 normal television viewing, the video signals provided to television 36 correspond to the desired channel to which the user has tuned with set-top box 28. When the user wishes to view interactive television program guide information, the user may, for example, press a
25 "guide" button on remote control 40 or view the information using other suitable technique. When set-top box 28 receives commands from remote control 40 that inform set-top box 28 that the guide button has been pressed, the interactive television program guide
30 is invoked and processing circuitry within set-top box 28 displays various program guide display screens on television 36.

A more generalized embodiment of the user television equipment of 24 FIG. 2 is shown in FIG. 3. As shown in FIG. 3, video and data signals from television distribution facility 16 (FIG. 1) are
5 received by control circuitry 42 of user television equipment 44. Video signals are typically provided on multiple television channels. Data may be provided by transmission on a television channel sideband, in the vertical blanking interval of a television channel, as
10 a digital data stream either in-band with programming or out-of-band, or by any other suitable analog or digital data transmission technique.

The user controls the operation of user television equipment 44 with user input interface 46.
15 User input interface 46 may be a pointing device, wireless remote control, keyboard, touch pad, voice recognition system, or any other suitable user input device. To watch television, the user instructs control circuitry 42 to display a desired television
20 channel on monitor 48 or any other suitable display device such as a computer monitor. To record a program, the user instructs control circuitry 42 to record a desired television program using recording device 45 or any other suitable recording device such
25 as a recordable DVD or a hardisk. To view program guide information, the user instructs control circuitry 42 to display a program guide display screen on monitor 48.

The functions of control circuitry 42 may be
30 provided using the set-top box arrangement of FIG. 2. Alternatively, these functions may be integrated into a television or videocassette recorder arrangement.

These functions may also be provided by an advanced television receiver such as a high-definition television (HDTV) receiver, a personal computer television (PC/TV) or the like. If desired, a
5 combination of such arrangements may be used.

If desired, an interactive television program guide may be implemented on system 10 using a client-server architecture. For example, a server at television distribution facility 16 (17 of FIG. 1) may
10 operate in cooperation with user television equipment 22 which acts as a client. With this type of arrangement, some program guide functions (such as functions related to maintaining a program listings database) may be performed primarily at the server,
15 whereas other functions (such as display and user input functions) may be performed primarily at user television equipment 22. Moreover, in such a client-server architecture implementation, some or all of the reminder and recording functions may be implemented on
20 the server. Further features of an illustrative interactive television program guide implemented on a client-server architecture are described in Hassell et al. U.S. patent application Serial No._____, filed concurrently herewith (Attorney Docket No. UV-110),
25 which is hereby incorporated by reference herein in its entirety. Further features of an illustrative interactive television program guide implemented on a client-server architecture where recordings are performed on the server are described in Ellis et al.
30 U.S. patent application Serial No._____, filed concurrently herewith (Attorney Docket No. UV-84),

which is hereby incorporated by reference herein in its entirety.

When a user indicates a desire to view television program guide information (e.g., by entering
5 a command with user input interface 46), the program guide directs control circuitry 42 to generate a video image of a program guide display screen. The information for the program guide display screen may be contained in the data provided to the program guide
10 from data source 14 (FIG. 1) in main facility 12 (FIG. 1). This data typically contains several days worth of program listings information for the program guide.

An illustrative program listings grid 50 that may be displayed by the program guide is shown in FIG.
15 4. Program listings grid 50 has program listings rows 52, 54, 56, and 58. Program listings row 52 contains program listings for programs 1 and 2 on channel 2 (KJRH) during the time slots 6:30 PM, 7:00 PM, and 7:30 PM. Program listings row 54 contains program listings
20 for programs 1 and 2 on channel 3 (HBO), etc.

Program listings grid 50 (like other program guide screens displayed by the program guide) may have a highlight region 66. Highlight region 66 may be used to highlight the current grid cell (e.g., the grid cell
25 for the program SEINFELD in the example of FIG. 4). The range of movement of highlight region 66 is typically bounded by column 68 on the left, by program listings time cells 70 on the top, by screen boundary 72 on the right, and by lower screen boundary 74 on the
30 bottom. Time cell 76 may be used to display the current time and date cell 77 may be used to display the current date.

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The user may position highlight region 66 by entering appropriate commands with user input interface 46. For example, if user input interface 46 is a remote control such as remote control 40 of FIG. 2, the user can position highlight region 66 using arrow keys. As shown in FIG. 5, if the user repeatedly moves highlight region 66 until it reaches lower screen boundary 74, further attempts at downward movement cause the program listings to scroll in the vertical direction. In the illustrative example of FIG. 5, program listings rows 54, 56, and 58 have been moved up one position in the grid. A new program listings row 55 is displayed at the bottom of grid 50. Vertical movement of highlight region 66 in the upward direction may be used to scroll the program listings in the opposite direction.

Similarly, when highlight region 66 is panned in the horizontal direction (i.e., moved to the right or left), the listings move accordingly (i.e., to the left or right respectively). Program listings grid 50 is but one illustrative program guide screen that may be displayed by the program guide on user television equipment 22. Other program guide screens that the program guide may provide include menu screens, lists or tables of program listings, screens in which products are advertised, screens in which the current television channel is overlayed with a browse or flip region containing a program listing, television program screens without an overlay, etc. Any of these program screens and any suitable program guide features may be provided by the program guide. Moreover, any or all of

the features described may apply equally to any of the display formats described.

5 In a program guide display screen such as program listings grid 50, each program grid cell may contain descriptive information about a program, such as the program title, program rating, and a brief description. If the user wishes to set a reminder or schedule a recording for a program, the user may position highlight region 66 on the appropriate program listing. Once the user positions highlight region 66 on a particular program listing, the user may elect to set a reminder or schedule a recording for the program by pressing an "enter" button on remote control 40. If the "enter" button on remote control 40 is pressed, the user may be presented with a remind/record screen such as remind/record screen 70 of FIG. 6.

Remind/record screen 70 may present the user with the program title as well as the date and time the program is scheduled to air. Other components of remind/record screen 70 may be reminder option 85, record option 86, view current reminders option 87, view current recordings option 88, and cancel option 89. These options may be displayed on remind/record screen 70 whenever the user selects a program or event from program grid 50 (FIGS. 4 and 5) or from any other suitable guide screen.

If the user wishes to set a reminder to remind the user when a given program is to be broadcast, the user may position highlight region 95 of FIG. 6 onto reminder option 85 and press an "enter" button (or other similar button) on remote control 40. Alternatively, the user may position highlight region

66 on top of a desired future program listing in grid 50 (FIGS. 4 and 5) or other guide listing screen and may press "enter" (or other similar button).

- Once the "enter" button on remote control 40
- 5 has been pressed, the user may be presented with a program reminder screen such as program reminder screen 90 of FIG. 7. The program reminder screen may be a full screen as shown in FIG. 7, or may use a partial screen overlay or other suitable arrangement if
- 10 desired. Program reminder screen 90 contains various user-selectable options that the user may complete when setting reminder messages to remind the user when selected television programming is to be broadcast. As defined herein, such uses of the term "broadcast" refer
- 15 to the process of airing television programs by traditional television broadcast techniques, cable systems, satellite systems, microwave systems, etc.

- Program reminder screen 90 may provide several user-selectable options that specify when and
- 20 how often the user will be reminded of the airing of selected television programs or program series. As defined herein, such uses of the term "series" refer to any set of related programs such as a program series, mini-series, sports series, pay-per-view package, etc.
- 25 If the selected program is an episode of a program series, for example, program reminder screen 90 may contain episode/series reminder option 92. Episode/series reminder option 92 allows the user to either order a reminder for the currently selected
- 30 episode of the program or order reminders for all episodes in the entire series. For example, if the user wishes to order a series reminder, the user may

position highlight region 95 of FIG. 7 onto the "Entire Series" selection of episode/series reminder option 92 and press an "enter" button on remote control 40. Selecting the "Entire Series" option allows the user to
5 order and receive reminder messages for each episode of the program series. If the series is a mini series, reminders will end after the last episode of the series. If the series is an ongoing series, reminders will continue to be displayed for the series until
10 cancelled by the user. If the user chooses the "This episode" selection, the user may receive a reminder message for only the currently selected episode. If the selected program is a single broadcast and not an episode of a program series, the program guide will not
15 allow the user to make a selection using episode/series reminder option 92.

In addition to episode/series reminder option 92, program reminder screen 90 may contain other user-selectable reminder options that specify when and how
20 often the user will be reminded of the airing of the selected television program or episode. For example, program reminder screen 90 may also contain how soon option 93. How soon option 93 allows the user to indicate how soon before the broadcast of the scheduled
25 program or episode reminder messages are to be generated and displayed to the user. As shown in FIG. 7, how soon option 93 may contain an option that allows the user to be reminded from 1 to 15 minutes (in one minute increments) or another amount of time before the
30 selected program is broadcast. The user may make entries into how soon option 93 using remote control arrow keys to increase or decrease the desired value of

minutes, or by using remote control number keys to enter desired numerical values for the item, or by using any other suitable user interface. If "other" is selected in how soon option 93, the user is presented with screen 110 of FIG. 8, which allows the user to be reminded 1 hour, 1 day, 2 days, or to specify a desired lead time before a scheduled event by completing option 115. The user may make entries into screen 110 using remote control arrow keys to increase or decrease the desired values of days, hours, and minutes, or by using remote control number keys to enter desired numerical values for these items, or by using any other suitable user interface.

Upon completing screen 110 of FIG. 8, the user may submit the information that has been entered by selecting option 117. The user may exit page 110 without submitting the information by selecting exit option 119. If the user selects either enter option 117 or exit option 119, the user is returned to program reminder screen 90.

Alternatively, information such as how soon before the broadcast of the scheduled program or episode reminder messages are to be generated and displayed to the user may be a global default or global setting. For example, such information may be specified by the user in a set-up screen.

Program reminder screen 90 of FIG. 7 may also contain program channel option 104. Option 104 allows the user to specify which channel or channels program reminders are to be scheduled for. Option 104 may contain selections that allow the user to be reminded of program episodes airing on the selected channel, on

all channels on which the program airs, or on certain channels the program is scheduled to air on. Typically, if the user selects the "Selected Channels" option, the user may be allowed to specify certain
5 channel or channels program reminders are to be scheduled for.

Program reminder screen 90 of FIG. 7 may also contain program day option 107. Option 107 allows the user to specify on which days of the week program
10 reminders are to be scheduled for. Option 107 may contain selections that allow the user to be reminded of program episodes airing on the currently selected day of the week, on all days of the week, or on certain days of the week the program episode is scheduled to
15 air on. Typically, if the user selects the "Selected Days" option, the user may be allowed to specify certain day or days program reminders are to be scheduled for.

Program reminder screen 90 of FIG. 7 may also
20 contain program type option 108. Option 108 allows the user to specify which type of program episodes (assuming the selected program is an episode of a program series) program reminders are to be scheduled for. For example, as shown in FIG. 7, option 108 may
25 contain selections that allow the user to set reminders for new (i.e., first-run) episodes, rerun episodes, network episodes, syndicated episodes, only previously unviewed episodes, or all scheduled episodes whether first-run, rerun, network, syndicated, or previously
30 unviewed.

Typically, episode/series reminder option 92, program channel option 104, program day option 107, and

- program type option 108 may only be selectable by the user when the program selected from the guide is an episode of a program series. How soon option 93 may be selectable by the user regardless of whether or not the
- 5 program is an episode of a program series. If the selected program is not an episode of a program series but rather is a single broadcast event, the user may set a reminder for that single broadcast and be allowed to make a selection from how soon option 93.
- 10 Similarly, if the selected program is a program series and the user wishes to set a reminder for a single episode, the user may set a reminder for that single episode and be allowed to make a selection from how soon option 93.
- 15 At any time during the completion of program reminder screen 90 (FIG. 7), the user may cancel the reminder by selecting cancel option 97. Selecting cancel option 97 returns the user to display 70 of FIG. 6 or other previous screen. The user may also deselect
- 20 any previously selected option by positioning highlight region 95 on the selected option and pressing the "enter" button on remote control 40.
- Upon completing program reminder screen 90, the user may set the reminder by selecting OK option
- 25 94. Selecting OK option 94 directs the program guide to process the reminder. Set-top box 28 (FIG. 2) processes and stores each reminder set by the user. The system initially searches the existing database for all programs and episodes matching the criteria
- 30 specified by the user. The system will then set a reminder for each matching program or episode. Moreover, if any existing information has changed or

has been updated or if any new information has been added, the system will again examine the user criteria and set a reminder (or update or remove an existing reminder) for each new or updated program or episode.

- 5 The reminders are then generated by set-top box 28 and displayed on television 36 of FIG. 2 at the appropriate time. Depending on the type of television program (i.e., a series or non-series program) and the user-selectable options selected, the user may request and
10 receive one or more reminders.

- A typical series program reminder is shown in FIG. 9. The reminder is typically presented as a partial-screen overlay on top of the current television program being viewed by the user. The reminder may
15 contain the name of the television program that the user is being reminded of (120), a reminder message indicating "DON'T FORGET," and information on when the television program is to broadcast (123). If the program is an episode of a program series, the reminder
20 may also contain information on when the next episode is to broadcast (127). The user may hide the reminder by selecting hide option 129a. The user may immediately tune to the channel that is scheduled to show the desired program by selecting tune option 129b.
25 An advertisement 125 (text, graphics, etc.) may be included in the reminder if desired. The advertisement may be provided using information stored in main facility 12 and transmitted to user television equipment 22 with the program guide data.

- 30 Moreover, the program reminder may also list all other currently active program reminders. For example, if the user receives a program reminder such

as the program reminder shown in FIG. 9, the reminder may list the program that is currently scheduled to air for which the user has received the reminder, as well as the reminder for the current television program being viewed by the user (assuming the user set a reminder for that program in the past). The list may also include any other reminders the user has set and recently received. The program reminder for the program scheduled to air next will preferably be listed first however the user may specify any other reminder order based on user preferences. The user may select any reminder from the list and may immediately tune to the channel that is showing or will show the program.

Another aspect of the invention relates to managing one's reminders. If desired, program reminder screen 90 of FIG. 7 may contain view current reminders option 98. If view current reminders option 98 is selected, (or if desired when the user selects OK option 94 of program reminder screen 90), the user may be presented with current reminders screen 130 of FIG. 10. The user may also access current reminders screen 130 by selecting view current reminders option 87 of FIG. 6 or from any other guide screen such as a menu screen. Current reminders screen 130 contains a list of all the user's currently requested reminders. Information such as program name, program episode (i.e., whether a single broadcast or an episode of a program series), type of reminder, and the date and time the request was submitted may be displayed. Typically, the entries in current reminders screen 130 are listed in chronological order based on when they are to be presented to the user. The reminder for the

episode scheduled to air next will preferably be listed first however the user may specify any other reminder order based on user preferences.

For example, a current reminder entry for the
5 program "SEINFELD" (135) may be displayed as shown in FIG. 10. The user requested a reminder for only the selected episode of the program (i.e., not the entire series), a rerun episode, airing on July 9th on CH. 4 at 7:00 PM. This reminder was submitted on July 5,
10 1997 at 3:04 PM and is set to remind the user one hour before the broadcast of the episode. This entry is listed first and is the first scheduled program to air.

In addition, if the user requests reminders for an entire series, that information may be displayed
15 as well. Current reminders screen 130 may display each episode of the series scheduled to air. For example, as shown in FIG. 10, a current reminder entry for the program "THIS WEEK WITH SAM AND COKIE" (134) is displayed showing that a series reminder has been
20 requested (133). The user will receive reminders for all scheduled episodes of the series, one day before the broadcast of each episode of the series. The next entry in the list and the next program scheduled to air is the July 10th episode of the series and is the next
25 reminder to be presented to the user.

The user also requested a reminder for another episode of the "SEINFELD" series airing on July 14th on CH. 11 at 11:00 PM. This episode is listed next because that episode will air after the first
30 listed episode of the series "THIS WEEK WITH SAM AND COKIE" but before the next listed episode of the series. Finally, as shown in FIG. 10, the remaining

episodes of the series "THIS WEEK WITH SAM AND COKIE" are listed and the user will receive a reminder for each scheduled episode of the series. The user may select arrow icon 132 or any other suitable icon to display and scroll through the remaining episodes of the series.

Entries may be added to the current reminders list as soon as the user sets each reminder (e.g., by selecting OK option 94 from program reminder screen 90 of FIG. 7). Moreover, entries may be added to the current reminders list when the program guide automatically determines that newly scheduled program guide events match the reminder options for an existing program reminder listing. This may occur, for example, if newly added episodes are broadcast after the user has set reminders for a related series. In addition, if a schedule change is received by the program guide for any currently set reminder, the current reminder list will be updated to match the new schedule. This may prevent the user from missing a scheduled reminder due to unexpected programming schedule changes.

Moreover, the system may list series reminders set by the user even if there are no current episodes in the guide's database matching the criteria specified by the user. In addition to reminding the user the series reminder has been set, it allows the user to cancel the reminder if the user no longer wishes to be reminded of the broadcasts of that series. These reminders will preferably be located at the bottom of the list.

The user may also view and manage current reminders from elsewhere in the guide. For example,

the user may select a manage reminder option from a program guide menu screen. Selecting the option may also present the user with a current reminders listing.

In addition, the user may update or delete
5 any currently set reminder from any program guide grid or other guide listing screen or from the current reminders listing screen. The program grid entry may, for example, indicate to the user that a reminder has been set for the program or series and allow the user
10 to update or delete the reminder by selecting the program entry from the grid. For example, as shown in program grid 50 of FIG. 5, if a reminder is currently set for the program series "SEINFELD" (58), the grid may reflect that information by displaying a "check"
15 mark (59) or other suitable identifying mark within the program listing entry. If the user wishes to update or delete the reminder currently set for that program series, the user may position highlight region 66 on that program listing and press an "enter" button on
20 remote control 40. If the "enter" button on remote control 40 is pressed, the user may be presented with a program reminder update screen such as program reminder update screen 135 of FIG. 10a.

Program reminder update screen 135 of FIG.
25 10a may display the same user-selectable options and selections the user specified when ordering the reminder from program reminder screen 90 of FIG. 7. The user may update any option by positioning highlight region 95 onto the desired selection within the option
30 and pressing the "enter" button on remote control 40. If the selected program is an episode of a program series, program reminder update screen 135 may contain

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update reminder option 132. Update reminder option 132 allows the user to either update the reminder for the currently selected episode of the series or update reminders for all episodes in the entire series.

- 5 Similarly, if the selected program is not an episode of a program series but rather is a single broadcast event, the user may update the reminder for that single broadcast by updating the how soon option which may be the only option selectable by the user. Upon
- 10 completing program reminder update screen 135, the user may set the updated reminder by selecting OK option 121. After selecting OK option 121, current reminders screen 130 is updated with the new information.

- If the user wishes to cancel a current series
- 15 reminder, the user may position highlight region 95 onto cancel series reminder option 124 and press enter. If the user wishes to cancel a current episode reminder, the user may position highlight region 95 onto cancel current episode reminder option 112 and
- 20 press enter. Similarly, if the selected program is not an episode of a program series but rather is a single broadcast event, the user may select an option to cancel the reminder for that single broadcast. Upon selecting any cancel option, the cancelled reminder or
- 25 reminders for the program, episode, or series is/are deleted from the current reminders list (130) and the user will no longer be reminded of the broadcast or broadcasts of that program or series. The user may return to program grid 50 or any other previous screen
- 30 by selecting exit option 111.

Current reminders screen 130 may also indicate whether there are any conflicting reminders.

Conflicting reminders screen 130 may inform the user that two or more programs or series episodes that the user has requested reminders for are scheduled to air simultaneously (i.e., on the same day and time, partially or entirely). If the system is configured to maintain simultaneous conflicting reminders, current reminders screen 130 may not indicate to the user that there are conflicting reminders. However, displaying conflicting reminders may be preferred. For example, rather than the user receiving a reminder message such as the reminder message shown in FIG. 9, the system may instead tune to the channel showing the program when the program is scheduled to air. For example, the system may be configured to automatically tune to a program when a reminder for that program has been received (i.e., an automatically tuning reminder). In a system configured to provide automatically tuning reminders, the user or the system would need to resolve any conflicts.

As shown in current reminders screen 180 of FIG. 13, for example, the user has requested reminders for programs X, Y, and Z. Programs X and Z are single broadcasts while program Y is a program series. As shown in the "EPISODES" column (181) of FIG. 13, an episode of program Y is scheduled to air on the same day and time (i.e., May 3, 1997 at 8:00 PM) as program X. Accordingly, current reminders screen 180 displays a conflicting reminders message such as conflicting reminders message 183 (i.e., "CONFLICT") of FIG. 13. Program conflicts may also be displayed using other suitable techniques, such as displaying the conflicting program listings with a unique color or icon.

The user may decide to resolve the conflict before the programs are scheduled to air by cancelling one of the conflicting reminders (described below). Alternatively, the user may decide to maintain all the
5 scheduled reminders and choose among the conflicting programs when the programs are scheduled to air. Moreover, in systems configured to provide automatically tuning reminders, the guide may resolve conflicts based on system defaults or previously
10 specified user settings.

If the user wishes to cancel a current reminder that the user has previously set, the user may highlight the desired entry on current reminders screen 130 with highlight region 131 (as shown in FIG. 10) and
15 press "enter" on remote control 40. If the "enter" button on remote control 40 is pressed, the user may be presented with a program reminder update screen such as program reminder update screen 135 of FIG. 10a. Once presented with program reminder update screen 135, the
20 user may cancel a single program broadcast, a program episode, or an entire program series by selecting the appropriate option. Moreover, the user may resolve the conflict by updating a reminder using program reminder update screen 135. For example, the user may update
25 the program channels option to resolve the conflict. If the user wishes to cancel the series reminder set for the entire series of "THIS WEEK WITH SAM AND COKIE" shown in FIG. 10, the user may position highlight region 131 on that entry under the "PROGRAM" column and
30 press enter. After pressing enter, the user may be presented with program reminder update screen 135 from which the user may select cancel series reminder option

124. After selecting cancel option 124, the highlighted series is deleted from current reminders list 130 and the user will no longer be reminded of the broadcasts of that series. The user may return to
5 current reminders screen 130 or any program guide menu screen by selecting exit option 139.

Another aspect of the invention relates to scheduling a program episode or program series to be recorded. If the user wishes to record a program
10 episode or series, the user may position highlight region 95 of FIG. 6 onto record option 86 and press an enter or other similar button on remote control 40 or may press a record button on remote control 40 to record the program. If the enter button on remote
15 control 40 is pressed, the user may be presented with a program record screen such as program record screen 140 of FIG. 11. Program record screen 140, contains various user-selectable options the user may complete when scheduling program recordings. For example,
20 program record screen 140 may contain episode/series record option 142. Making a selection in episode/series record option 142 allows the user (if the selected program is a program series) to either schedule a recording for the currently selected episode
25 of the program or schedule recordings for all episodes in the entire series. For example, episode/series record option 142 may allow the user the schedule recordings for an entire program series by positioning highlight region 95 and selecting the "Entire Series"
30 option. If the user instead selects the "This episode" option, the user may schedule a recording for only the currently selected episode. If the selected program is

a single broadcast and not an episode of a program series, the user may not select an option in episode/series record option 142.

In addition to episode/series record option 142, program record screen 140 may also contain other user-selectable record options, provided that the selected program is a program series and the user has selected to record the entire series. These record options allow the user to specify which episodes of the program series the user wishes to record. For example, program record screen 140 may contain program channel option 145, program day option 146, and program type option 147. However, these record options may not be selectable by the user if the selected program is a single broadcast event or if the selected program is a program series and the user wishes to schedule a recording for a single episode of the series. At any time during completion of program record screen 140, the user may cancel the record order by selecting cancel option 148. Selecting cancel option 148 returns the user to display 70 of FIG. 6 or another previous screen. The user may also access program reminder screen 90 of FIG. 10 by selecting reminders option 149. Moreover, the user may deselect any previously selected option by positioning highlight region 95 on the selected option and pressing the enter button on remote control 40.

In another aspect of the invention, the information displayed in program reminder screen 90 of FIG. 7 and program record screen 140 of FIG. 11 may be displayed on the same program guide screen.

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Upon completing program record screen 140, the user may submit a record order for processing by selecting OK option 144. Selecting OK option 144 directs the program guide to process the request. Set-top box 28 may contain control circuitry to process and store each request submitted by the user. In a client-server architecture implementation, the processing and storing of requests may be performed at the server. The system initially searches the existing database for all programs and episodes matching the criteria specified by the user. The system will then schedule a recording for each matching program or episode. Moreover, if any existing information has changed or has been updated or if any new information has been added, the system will again examine the user criteria and schedule a recording (or update or delete an existing recording) for each new or updated program or episode. Set-top box 28 of FIG. 2 will send recording control signals to videocassette recorder 32 via line 30 to direct videocassette recorder 32 to initiate recording of the program or series episode at the proper recording time.

Another aspect of the invention relates to managing one's scheduled recordings. If desired, program record screen 140 of FIG. 11 may contain view current recordings option 143. If view current recordings option 143 is selected, the user may be presented with current recordings screen 170 of FIG. 12. Moreover, the guide may also present current recordings screen 170 when the user selects OK button 144 of program record screen 140. Current recordings screen 170, similar to current reminders screen 130 of

5 recordings screen 170 may also indicate whether the
user has scheduled a recording for a single broadcast
or a program series.

Moreover, the system may list series recordings set by the user even if there are no current episodes in the guide's database matching the criteria specified by the user. In addition to reminding the user the series recording has been set, it allows the user to cancel the recording if desired. These recordings will preferably be located at the bottom of the list.

The user may also view and manage currently
30 scheduled recordings from elsewhere in the guide. For
example, the user may select a manage recording option
from a program guide menu screen. Selecting the option

may also present the user with a current recordings listing.

In addition, similar to currently set reminders (as described earlier), the user may update or delete any currently scheduled recording from any program guide grid or other guide listing screen or from current recordings listing 170. The program grid entry may, for example, indicate to the user that a recording has been scheduled for the program or series and allow the user to update or delete the recording by selecting the program entry from the grid. For example, as shown in program grid 50 of FIG. 5, if a recording is currently scheduled for the program series "SEINFELD" (58), the grid may reflect that information by displaying a "check" mark (59) or other suitable identifying mark within the program listing entry (preferably a different identifying mark than one used to identify currently set reminders). If the user wishes to update or delete the recording currently scheduled for that program series, the user may position highlight region 66 on that program listing and press an "enter" button on remote control 40. If the "enter" button (or other suitable key) on remote control 40 is pressed, the user may be presented with a program recording update screen such as program recording update screen 175 of FIG. 12a.

Program recording update screen 175 of FIG. 12a, similar to program reminder update screen 135, may display the same user-selectable options and selections the user specified when scheduling the recording from program record screen 140 of FIG. 11. The user may update any option by positioning highlight region 95

onto the desired selection within the option and pressing the "enter" button on remote control 40. Upon completing program recording update screen 175, the user may schedule the updated recording by selecting OK
5 option 173. After selecting OK option 173, current recordings screen 170 is updated with the new information.

If the user wishes to cancel a current series recording, the user may position highlight region 95
10 onto cancel series recording option 174 and press enter. If the user wishes to cancel a current episode recording, the user may position highlight region 95 onto cancel current episode recording option 175 and press enter. Similarly, if the selected program is not
15 an episode of a program series but rather is a single broadcast event, the user may select an option to cancel the recording for that single broadcast. After selecting any cancel option, the cancelled program, episode, or series is deleted from the current
20 recordings list (170) and the user will no longer record that program or series. The user may return to program grid 50 or another previous screen by selecting exit option 176.

Similarly, if the user wishes to cancel a
25 currently scheduled recording that the user has previously ordered from the current recordings list 170 of FIG. 12, the user may highlight the desired entry on current recordings screen 170 with highlight region 171 (as shown in FIG. 12) and press a remote control enter
30 key. If the enter button on the remote control is pressed, the user may again be presented with program recording update screen 175 of FIG. 12a. The user may,

as described above, cancel or update a single program broadcast, a program episode, or an entire series from current recordings screen 170. The user may return to current recordings screen 170 by selecting exit option 5 176.

The user may also access current reminders screen 130 of FIG. 10 by selecting view current reminders option 177 from current recordings screen 170. Moreover, the user may also arrive at current 10 recordings screen 170 by selecting view current recordings option 88 of program information screen 70 (FIG. 6).

Current recordings screen 170 may also indicate whether there are any conflicting recordings 15 by displaying a conflicting recordings message similar to conflicting reminders message 183 of FIG. 13. If the system allows simultaneous recordings (such as the system described in Ellis et al. U.S. patent application Serial No. _____, filed concurrently 20 herewith (Attorney Docket No. UV-84)), the system may not indicate or display any conflicts. However, in systems where user television equipment 24 of FIG. 2 contains a single videocassette recorder, the user must resolve the conflict because a single videocassette 25 recorder cannot support multiple simultaneous recordings.

Preferably, the program guide allows the user to resolve conflicts as soon as conflicts are detected. For example, as shown in current recordings screen 190 30 of FIG. 14, the user has scheduled recordings for programs X, Y, and Z. Programs X and Z are single broadcasts while program Y is a program series. As

shown in the "EPISODES" column (191) of FIG. 14, an episode of program Y is scheduled to air on the same day and at the same time (i.e., May 3, 1997 at 8:00 PM) as program X. Accordingly, current recordings screen 190 may display a conflicting recordings message such as conflicting recordings message 194 (i.e., "CONFLICT") of FIG. 14. Program conflicts may also be displayed using other suitable techniques, such as displaying the conflicting programs with a unique color or icon, etc. The user may be allowed to resolve the conflict by selecting resolve conflicts option 193 of FIG. 14. If the user selects resolve conflicts button 193, the user may be presented with resolve conflicts screen 210 of FIG. 15.

In another aspect of the invention, the user may be notified of a conflict and allowed to resolve the conflict from the same program guide screen.

As shown in FIG. 15, resolve conflicts screen 210 may display the program names, the date and time the recording request was submitted, and the date and time of the detected conflict. Resolve conflicts screen 210 may allow the user to choose which of the conflicting programs or episodes are to be recorded. For example, as shown in FIG. 15, conflicting programs X and Y are listed. Although program Y is a scheduled program series to be recorded, only the conflicting program episode is listed. Program X is listed first and assumed preferred by the user over program episode Y because its request was submitted most recently by the user. While the program listing order represents recording priority, the system may or may not record programs based on the program listing order. Resolve

conflicts screen 210 may list conflicting programs based on other possible user designated criteria such as program start times, channel numbers, single episodes over series, etc., or may list conflicting programs based on the system's own priority scheme. Accordingly, other scheduled programs or episodes in the list may, for example, have a line drawn through them to indicate they are not preferred by the user and that their scheduled recordings are to be deleted or updated. For example, as shown in FIG. 15, program episode Y has a line drawn through it and that scheduled recording may be deleted or updated if the program listing is selected. If the program listing is selected, the user may be presented with program recording update screen 175 of FIG. 12a. The user may, as described earlier, cancel the conflicting program, series episode, or series. The user may also, if desired, resolve the conflict by updating the conflicting recording from recording update screen 175. If the user deletes the entry for program episode Y, the user may not record that episode but the scheduled recording for all other episodes of that program series will remain. In addition, the user may do nothing whereby the guide will resolve the conflict based on system or user default settings (e.g., record program X).

However, if the user would rather cancel or update the scheduled recording of program X and retain the scheduled recording of program episode Y, the user may position highlight region 212 on the program episode X entry and press the enter button on remote control 40. This allows the user to be presented with

program recording update screen 175 for program episode X where the user may cancel or update the episode or series. This may cause program episode Y to be listed first and program X to be listed next with a line drawn through it indicating that that entry has been deleted or updated, as shown in FIG. 16. The user, once the conflict is resolved, may return to current recordings screen 190 or another previous screen by selecting exit option 214.

While the program guide allows the user to resolve conflicts as soon as conflicts are detected, a user may decide not to resolve a conflict once one is detected. Furthermore, the program guide may not detect a conflict immediately after the user submits a recording request to be processed, but may detect a conflict at a later time when the user may or may not be in the program guide. The latter situation may arise, for example, if new program information in the database is added or existing information is updated since the user last submitted a request.

The program guide may allow the user to resolve any future conflicts detected by the guide by notifying the user of the conflicts as soon as they are detected. The program guide may display a conflicting recordings message such as conflicting recordings message 194 of FIG. 14 or may display resolve conflicts screen 210 of FIG. 15. The user may resolve the conflict by selecting resolve conflicts option 193 of FIG. 14. If the user selects resolve conflicts button 193, the user may be presented with resolve conflicts screen 210 of FIG. 15 and allowed to resolve the conflict as discussed previously. If the user is not

in the guide when a conflict is detected, the user may be presented with resolve conflicts screen 210 or any other suitable conflicting recordings message and allowed to resolve the conflict as soon as the user
5 enters the guide or at any other time specified by the user.

However, if the user does not resolve the conflict, the program guide may resolve the conflict based on its own preference scheme. The approach used
10 by the guide may be based on global system defaults or settings or may be specified by the user (e.g., by completing a set-up screen when the user first enters the guide).

The guide may, for example, record the
15 program listed first in resolve conflicts screen 210 of FIG. 15 and reject the remaining programs in conflict. The program listed first is assumed preferred by the user because its recording request was submitted most recently by the user. However, the guide may use other
20 criteria in deciding which program to record such as program start times, channel numbers, or any other suitable priority scheme. The criteria may be specified by the user or programmed as global defaults. The guide may allow the user to view the program
25 selection as well as approve or change the selection at any time before the conflicting programs or episodes are scheduled to air. This may be accomplished, for example, from current recordings screen 190 of FIG. 14 or from any other suitable recording screen.

30 The guide may resolve conflicts by recording the program listed first in resolve conflicts screen 210 (or any other preferred listed program based on

user-specified or system criteria) and record the remaining portion (if any) of the next preferred program in the list. The guide may allow the user to view the program selections as well as the recording sequence and may allow the user to approve or change the selections and/or recording sequence at any time before the programs are scheduled to air. This may again be accomplished, for example, from current recordings screen 190 of FIG. 14 or from any other suitable recording screen.

In another aspect of the invention, currently set reminders and currently scheduled recordings may be listed and displayed on the same program guide screen. Moreover, the user may be notified of conflicting reminders and recordings from the same program guide screen and allowed to resolve all conflicts simultaneously using any or all of the principles discussed. However, if the system is configured to allow the user to record a program while viewing a different program and thus allow the user to receive a reminder message, the system may not notify the user of conflicts or may not allow the user to resolve conflicts. Further features of an illustrative interactive television program guide with simultaneous watch and record capabilities are described in Lemmons et al. U.S. patent application Serial No. _____, filed concurrently herewith (Attorney Docket No. UV-67), which is hereby incorporated by reference herein in its entirety.

FIG. 17 is a diagram showing the interrelationship of the illustrative program guide screens used to provide the features of the invention.

The features can initially be accessed from any program guide display screen such as program listings grid 50 of FIG. 5 or while watching television. When the user selects a given television program, remind/record screen 70 of FIG. 6 displays reminder option 85, record option 86, view current reminders option 87, and view current recordings option 88. View current reminders option 87, and view current recordings option 88 may also be accessed from elsewhere in the guide such as a guide menu screen. Selecting the reminder option 85 from remind/record screen 70 takes the user to program reminder screen 90 of FIG. 7 or to program reminder update screen 135 of FIG. 10a. Program reminder screen 90 may provide the user with several options to specify when and how often the user will be reminded of the airing of selected television programs or program series. The user may also reach program reminder screen 90 from program record screen 140 of FIG. 11 by selecting reminder option 149 or from any program guide display screen or from watching television.

The user may also access view, update, or cancel any existing set reminders or scheduled recordings by selecting a television program from a program guide display screen or from remind/record screen of FIG. 6. If the user selects a television program from a program guide display screen which has an existing reminder or scheduled recording, the user may be presented with program reminder update screen of FIG. 10a or program recording update screen of FIG. 12a.

The user may also access current reminders screen 130 of FIG. 10 by selecting view current

reminders option 87 of FIG. 6 or from somewhere else in the guide such as a main menu screen. Once the user submits a reminder order, the reminder or reminders are added to (and the user may be presented with) current reminders screen 130. The user may also access current reminders screen 130 from program reminder screen 90 of FIG. 7 by selecting view current reminders option 98 or from current recordings screen 170 of FIG. 12 by selecting view current reminders option 177. While at current reminders screen 130, the user may view all current reminders and may delete or update any reminder which is no longer desired. The user may also view any reminder conflicts and may resolve the conflicts or decide to choose among the conflicting events when the scheduled programs air.

Selecting record option 86 from remind/record screen 70 of FIG. 6 takes the user to program record screen 140 of FIG. 11 or to program recording update screen of FIG. 12a. Program record screen 140 may provide the user with several options to complete when scheduling program recordings. The user may also reach program record screen 140 from program reminder screen 90 of FIG. 7 by selecting record option 96 or from any program display screen or from watching television.

The user may also access current recordings screen 170 of FIG. 12 by selecting view current recordings option 88 of FIG. 6 or from somewhere else in the guide such as a main menu screen. Once the user submits a request to schedule a recording, the scheduled recording or recordings are added to (and the user may be presented with) current recordings screen 170. The user may also access current recordings

screen 170 from program recording screen 140 of FIG. 11 by selecting view current recordings option 143 or from current reminders screen 130 of FIG. 10 by selecting view current recordings option 137. While at current
5 recordings screen 170, the user may view all currently scheduled recordings and may delete or update any scheduled recording which is no longer desired. The user may also view any recording conflicts and preferably may resolve any conflicts when they are
10 detected. The user may resolve recording conflicts from resolve conflicts screen 210 of FIG. 15 by selecting resolve conflicts option 193 of current recordings screen 190 of FIG. 14 and may view or resolve conflicts from current recordings screen of
15 FIG. 12. The user may also view and resolve conflicts between currently set reminders and currently scheduled recordings from the same program guide screen. The guide may or may not display conflicts depending on the capabilities of the system.

20 The foregoing is merely illustrative of the principles of this invention and various modifications can be made by those skilled in the art without departing from the scope and spirit of the invention.

What is Claimed is:

1. An interactive television program guide system in which television programs are displayed on user television equipment of a plurality of users comprising:

means for allowing a user to select an option that sets program reminders for each of the programs that are part of a given series; and

means for automatically displaying individual reminders on the user television equipment of the user for each television program in that series.

2. The interactive television program guide system defined in claim 1 wherein the means for displaying comprises means for displaying a partial screen overlay reminder message for each television program in the series.

3. The interactive television program guide system defined in claim 1 wherein the means for displaying comprises means for displaying a reminder message on a program guide display screen for each television program in the series.

4. The interactive television program guide system defined in claim 3 wherein the means for displaying the reminder message further comprises means for hiding the reminder message.

5. The interactive television program guide system defined in claim 1 wherein the means for setting the reminder message comprises means for automatically

tuning to a channel that is scheduled to show the television program.

6. The interactive television program guide system defined in claim 2 wherein the means for displaying the reminder message comprises means for automatically tuning to a channel that is scheduled to show the television program.

7. The interactive television program guide system defined in claim 1 further comprising a television distribution facility for distributing the television programs to the user television equipment and for distributing television program listings to the user television equipment.

8. The interactive television program guide system defined in claim 7 wherein the television distribution facility comprises a server on which an interactive television program guide is at least partially implemented.

9. The interactive television program guide system defined in claim 1 further comprising means for selecting a television program.

10. The interactive television program guide system defined in claim 9 further comprising means for displaying a remind/record screen based on the television program selection.

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11. The interactive television program guide system defined in claim 10 further comprising means for displaying a reminder option on the remind/record screen which the user selects to set television program series reminders.

12. The interactive television program guide system defined in claim 11 further comprising means for displaying a reminder options screen on the user television equipment when the user selects the reminder option.

13. The interactive television program guide system defined in claim 9 further comprising means for displaying a reminder options screen on the user television equipment when the user selects the television program.

14. The interactive television program guide system defined in claim 12 further comprising means for displaying reminder options on the reminder options screen.

15. The interactive television program guide system defined in claim 12 further comprising means for displaying a record option on the reminder options screen.

16. The interactive television program guide system defined in claim 1 further comprising means for displaying an option to schedule a reminder for a single episode of a series.

17. The interactive television program guide system defined in claim 1 further comprising means for displaying an option to schedule a reminder for a given program at different lengths of time before the scheduled broadcast time of that program.

18. The interactive television program guide system defined in claim 1 further comprising means for displaying an option to schedule a reminder for given programs which are part of the series on specific channels on which the programs are to be broadcast.

19. The interactive television program guide system defined in claim 1 further comprising means for displaying an option to schedule a reminder for given programs which are part of the series on all channels on which the programs are to be broadcast.

20. The interactive television program guide system defined in claim 1 further comprising means for displaying an option to schedule a reminder for given programs which are part of the series on specific days of the week on which the programs are to be broadcast.

21. The interactive television program guide system defined in claim 1 further comprising means for displaying an option to schedule a reminder for given programs which are part of the series on all days of the week on which the programs are to be broadcast.

22. The interactive television program guide system defined in claim 1 further comprising means for

displaying an option to schedule a reminder for first-run broadcasts of given programs which are part of the series.

23. The interactive television program guide system defined in claim 1 further comprising means for displaying an option to schedule a reminder for rerun broadcasts of given programs which are part of the series.

24. The interactive television program guide system defined in claim 1 further comprising means for displaying an option to schedule a reminder for network broadcasts of given programs which are part of the series.

25. The interactive television program guide system defined in claim 1 further comprising means for displaying an option to schedule a reminder for syndicated broadcasts of given programs which are part of the series.

26. The interactive television program guide system defined in claim 1 further comprising means for displaying an option to schedule a reminder for previously unviewed broadcasts of given programs which are part of the series.

27. The interactive television program guide system defined in claim 1 further comprising means for displaying an option to schedule a reminder for all rerun, first-run, network, syndicated, and previously

unviewed broadcasts of given programs which are part of the series.

28. The interactive television program guide system defined in claim 1 further comprising means for displaying a view current reminders option which the user selects to receive a list of current reminder orders.

29. The interactive television program guide system defined in claim 28 wherein the means for displaying a view current reminders option further comprises means for displaying a view current reminders screen on the user television equipment when the user selects the view current reminders option.

30. The interactive television program guide system defined in claim 28 further comprising means for displaying the view current reminders option on a reminder options screen.

31. The interactive television program guide system defined in claim 28 further comprising means for displaying the view current reminders option on a remind/record screen.

32. The interactive television program guide system defined in claim 28 further comprising means for displaying the view current reminders option on a program guide menu screen.

00000792-001109

33. The interactive television program guide system defined in claim 1 further comprising means for displaying a program reminder update screen.

34. The interactive television program guide system defined in claim 9 wherein the means for selecting the television program further comprises means for displaying a program reminder update screen.

35. The interactive television program guide system defined in claim 29 wherein the means for displaying the view current reminders screen further comprises means for displaying a program reminder update screen.

36. The interactive television program guide system defined in claim 33 further comprising means for deleting a reminder order.

37. The interactive television program guide system defined in claim 33 further comprising means for updating a reminder order.

38. The interactive television program guide system defined in claim 36 further comprising means for deleting a single episode reminder order.

39. The interactive television program guide system defined in claim 36 further comprising means for deleting an entire series reminder order.

40. The interactive television program guide system defined in claim 1 further comprising means for displaying conflicting reminders.

41. The interactive television program guide system defined in claim 1 further comprising means for not displaying conflicting reminders if the system supports simultaneous reminders.

42. The interactive television program guide system defined in claim 1 further comprising means for allowing the user to resolve conflicts between reminders.

43. An interactive television program guide system in which television programs are displayed on user television equipment of a plurality of users comprising:

means for allowing a user to select an option that schedules program recordings for each of the programs that are part of a given series; and

means for automatically recording each television program in the series.

44. The interactive television program guide system defined in claim 43 further comprising means for recording using the user television equipment.

45. The interactive television program guide system defined in claim 43 further comprising means for recording on a server.

2025 RELEASE UNDER E.O. 14176

46. The interactive television program guide system defined in claim 43 further comprising a television distribution facility for distributing the television programs to the user television equipment and for distributing television program listings to the user television equipment.

47. The interactive television program guide system defined in claim 46 wherein the television distribution facility comprises a server on which an interactive television program guide is at least partially implemented.

48. The interactive television program guide system defined in claim 43 further comprising means for selecting a television program.

49. The interactive television program guide system defined in claim 48 further comprising means for displaying a remind/record screen based on the television program selection.

50. The interactive television program guide system defined in claim 49 further comprising means for displaying a record option on the remind/record screen which the user selects to schedule television program series recordings.

51. The interactive television program guide system defined in claim 50 further comprising means for displaying a recording options screen on the user

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television equipment when the user selects the record option.

52. The interactive television program guide system defined in claim 48 further comprising means for displaying a recording options screen on the user television equipment when the user selects the television program.

53. The interactive television program guide system defined in claim 51 further comprising means for displaying recording options on the recording options screen.

54. The interactive television program guide system defined in claim 51 further comprising means for displaying a reminder option on the recording options screen.

55. The interactive television program guide system defined in claim 43 further comprising means for displaying an option to schedule a recording for a single episode of a series.

56. The interactive television program guide system defined in claim 43 further comprising means for displaying an option to schedule a recording for given programs which are part of the series on specific channels on which the program is to be broadcast.

57. The interactive television program guide system defined in claim 43 further comprising means for

displaying an option to schedule a recording for given programs which are part of the series on all channels on which the program is to be broadcast.

58. The interactive television program guide system defined in claim 43 further comprising means for displaying an option to schedule a recording for given programs which are part of the series on specific days of the week on which the program is to be broadcast.

59. The interactive television program guide system defined in claim 43 further comprising means for displaying an option to schedule a recording for given programs which are part of the series on all days of the week on which the program is to be broadcast.

60. The interactive television program guide system defined in claim 43 further comprising means for displaying an option to schedule a recording for first-run broadcasts of given programs which are part of the series.

61. The interactive television program guide system defined in claim 43 further comprising means for displaying an option to schedule a recording for rerun broadcasts of given programs which are part of the series.

62. The interactive television program guide system defined in claim 43 further comprising means for displaying an option to schedule a recording for

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network broadcasts of given programs which are part of the series.

63. The interactive television program guide system defined in claim 43 further comprising means for displaying an option to schedule a recording for syndicated broadcasts of given programs which are part of the series.

64. The interactive television program guide system defined in claim 43 further comprising means for displaying an option to schedule a recording for previously unrecorded broadcasts of given programs which are part of the series.

65. The interactive television program guide system defined in claim 43 further comprising means for displaying an option to schedule a recording for all rerun, first-run, network, syndicated, and previously unrecorded broadcasts of given programs which are part of the series.

66. The interactive television program guide system defined in claim 43 further comprising means for displaying a view current recordings option which the user selects to receive a list of current scheduled recordings.

67. The interactive television program guide system defined in claim 66 wherein the means for displaying a view current recordings option further comprises means for displaying a view current

recordings screen on the user television equipment when the user selects the view current recordings option.

68. The interactive television program guide system defined in claim 66 further comprising means for displaying the view current recordings option on a recording options screen.

69. The interactive television program guide system defined in claim 66 further comprising means for displaying the view current recordings option on a remind/record screen.

70. The interactive television program guide system defined in claim 66 further comprising means for displaying the view current recordings option on a program guide menu screen.

71. The interactive television program guide system defined in claim 43 further comprising means for displaying a program recording update screen.

72. The interactive television program guide system defined in claim 48 wherein the means for selecting the television program further comprising means for displaying a program recording update screen.

73. The interactive television program guide system defined in claim 67 wherein the means for displaying the view current recordings screen further comprising means for displaying a program recording update screen.

74. The interactive television program guide system defined in claim 71 further comprising means for deleting a scheduled recording.

75. The interactive television program guide system defined in claim 71 further comprising means for updating a scheduled recording.

76. The interactive television program guide system defined in claim 74 further comprising means for deleting a single episode scheduled recording.

77. The interactive television program guide system defined in claim 74 further comprising means for deleting an entire series scheduled recording.

78. The interactive television program guide system defined in claim 43 further comprising means for displaying conflicting recordings.

79. The interactive television program guide system defined in claim 43 further comprising means for not displaying conflicting recordings if the system supports simultaneous recordings.

80. The interactive television program guide system defined in claim 43 further comprising means for allowing the user to resolve conflicts between scheduled recordings.

81. The interactive television program guide system defined in claim 43 further comprising means for

09330792-064199

allowing the system to resolve conflicts between scheduled recordings.

82. The interactive television program guide system defined in claim 43 further comprising means for displaying scheduled recordings and scheduled reminders on a program guide screen.

83. The interactive television program guide system defined in claim 82 further comprising means for displaying conflicts between recordings and reminders.

84. The interactive television program guide system defined in claim 82 further comprising means for not displaying conflicts between recordings and reminders if the system supports simultaneous watch and record.

85. The interactive television program guide system defined in claim 82 further comprising means for allowing the user to resolve conflicts between recordings and reminders.

86. A method for displaying television programs on user television equipment of a plurality of users, comprising the steps of:

allowing a user to select an option that sets program reminders for each of the programs that are part of a given series; and

automatically displaying individual reminders on the user television equipment of the user for each television program in that series.

87. The method defined in claim 86 wherein the step of displaying comprises the step of displaying a partial screen overlay reminder message for each television program in the series.

88. The method defined in claim 86 wherein the step of displaying comprises the step of displaying a reminder message on a program guide display screen for each television program in the series.

89. The method defined in claim 88 wherein the step of displaying the reminder message further comprises the step of hiding the reminder message.

90. The method defined in claim 87 wherein the step of setting the reminder message comprises the step of automatically tuning to a channel that is scheduled to show the television program.

91. The method defined in claim 87 wherein the step of displaying the reminder message comprises the step of automatically tuning to a channel that is scheduled to show the television program.

92. The method defined in claim 86 further comprising the step of distributing the television programs to the user television equipment and the step of distributing television program listings to the user television equipment.

93. The method defined in claim 86 further comprising the step of selecting a television program.

94. The method defined in claim 93 further comprising the step of displaying a remind/record screen based on the television program selection.

95. The method defined in claim 94 further comprising the step of displaying a reminder option on the remind/record screen which the user selects to set television program series reminders.

96. The method defined in claim 95 further comprising the step of displaying a reminder options screen on the user television equipment when the user selects the reminder option.

97. The method defined in claim 93 further comprising the step of displaying a reminder options screen on the user television equipment when the user selects the television program.

98. The method defined in claim 96 further comprising the step of displaying reminder options on the reminder options screen.

99. The method defined in claim 96 further comprising the step of displaying a record option on the reminder options screen.

100. The method defined in claim 86 further comprising the step of displaying an option to schedule a reminder for a single episode of a series.

101. The method defined in claim 86 further comprising the step of displaying an option to schedule a reminder for a given program at different lengths of time before the scheduled broadcast time of that program.

102. The method defined in claim 86 further comprising the step of displaying an option to schedule a reminder for given programs which are part of the series on specific channels on which the program is to be broadcast.

103. The method defined in claim 86 further comprising the step of displaying an option to schedule a reminder for given programs which are part of the series on all channels on which the program is to be broadcast.

104. The method defined in claim 86 further comprising the step of displaying an option to schedule a reminder for given programs which are part of the series on specific days of the week on which the program is to be broadcast.

105. The method defined in claim 86 further comprising the step of displaying an option to schedule a reminder for given programs which are part of the series on all days of the week on which the program is to be broadcast.

106. The method defined in claim 86 further comprising the step of displaying an option to schedule

a reminder for first-run broadcasts of given programs which are part of the series.

107. The method defined in claim 86 further comprising the step of displaying an option to schedule a reminder for rerun broadcasts of given programs which are part of the series.

108. The method defined in claim 86 further comprising the step of displaying an option to schedule a reminder for network broadcasts of given programs which are part of the series.

109. The method defined in claim 86 further comprising the step of displaying an option to schedule a reminder for syndicated broadcasts of given programs which are part of the series.

110. The method defined in claim 86 further comprising the step of displaying an option to schedule a reminder for previously unviewed broadcasts of given programs which are part of the series.

111. The method defined in claim 86 further comprising the step of displaying an option to schedule a reminder for all rerun, first-run, network, syndicated, and previously unviewed broadcasts of given programs which are part of the series.

112. The method defined in claim 86 further comprising the step of displaying a view current

reminders option which the user selects to receive a list of current reminder orders.

113. The method defined in claim 112 wherein the step of displaying a view current reminders option further comprises the step of displaying a view current reminders screen on the user television equipment when the user selects the view current reminders option.

114. The method defined in claim 112 further comprising the step of displaying the view current reminders option on a reminder options screen.

115. The method defined in claim 112 further comprising the step of displaying the view current reminders option on a remind/record screen.

116. The method defined in claim 112 further comprising the step of displaying the view current reminders option on a program guide menu screen.

117. The method defined in claim 86 further comprising the step of displaying a program reminder update screen.

118. The method defined in claim 93 wherein the step of selecting a television program further comprises the step of displaying a program reminder update screen.

119. The method defined in claim 113 wherein the step of displaying the view current reminders

screen further comprises the step of displaying a program reminder update screen.

120. The method defined in claim 117 further comprising the step of deleting a reminder order.

121. The method defined in claim 117 further comprising the step of updating a reminder order.

122. The method defined in claim 120 further comprising the step of deleting a single episode reminder order.

123. The method defined in claim 120 further comprising the step of deleting an entire series reminder order.

124. The method defined in claim 86 further comprising the step of displaying conflicting reminders.

125. The method defined in claim 86 further comprising the step of not displaying conflicting reminders if the system supports simultaneous reminders.

126. The method defined in claim 86 further comprising the step of allowing the user to resolve conflicts between reminders.

127. A method for displaying television programs on user television equipment of a plurality of users, comprising the steps of:

allowing a user to select an option that schedules program recordings for each of the programs that are part of a given series; and

automatically recording each television program in the series.

128. The method defined in claim 127 further comprising the step of recording using the user television equipment.

129. The method defined in claim 127 further comprising the step of recording on a server.

130. The method defined in claim 127 further comprising the step of distributing the television programs to the user television equipment and the step of distributing television program listings to the user television equipment.

131. The method defined in claim 127 further comprising the step of selecting a television program.

132. The method defined in claim 131 further comprising the step of displaying a remind/record screen based on the television program selection.

133. The method defined in claim 132 further comprising the step of displaying a record option on

the remind/record screen which the user selects to schedule television program series recordings.

134. The method defined in claim 133 further comprising the step of displaying a recording options screen on the user television equipment when the user selects the record option.

135. The method defined in claim 131 further comprising the step of displaying a recording options screen on the user television equipment when the user selects the television program.

136. The method defined in claim 134 further comprising the step of displaying recording options on the recording options screen.

137. The method defined in claim 134 further comprising the step of displaying a reminder option on the recording options screen.

138. The method defined in claim 127 further comprising the step of displaying an option to schedule a recording for a single episode of a series.

139. The method defined in claim 127 further comprising the step of displaying an option to schedule a recording for given programs which are part of the series on specific channels on which the program is to be broadcast.

140. The method defined in claim 127 further comprising the step of displaying an option to schedule a recording for given programs which are part of the series on all channels on which the program is to be broadcast.

141. The method defined in claim 127 further comprising the step of displaying an option to schedule a recording for given programs which are part of the series on specific days of the week on which the program is to be broadcast.

142. The method defined in claim 127 further comprising the step of displaying an option to schedule a recording for given programs which are part of the series on all days of the week on which the program is to be broadcast.

143. The method defined in claim 127 further comprising the step of displaying an option to schedule a recording for first-run broadcasts of given programs which are part of the series.

144. The method defined in claim 127 further comprising the step of displaying an option to schedule a recording for rerun broadcasts of given programs which are part of the series.

145. The method defined in claim 127 further comprising the step of displaying an option to schedule a recording for network broadcasts of given programs which are part of the series.

146. The method defined in claim 127 further comprising the step of displaying an option to schedule a recording for syndicated broadcasts of given programs which are part of the series.

147. The method defined in claim 127 further comprising the step of displaying an option to schedule a recording for previously unrecorded broadcasts of given programs which are part of the series.

148. The method defined in claim 127 further comprising the step of displaying an option to schedule a recording for all rerun, first-run, network, syndicated, and previously unrecorded broadcasts of given programs which are part of the series.

149. The method defined in claim 127 further comprising the step of displaying a view current recordings option which the user selects to receive a list of current scheduled recordings.

150. The method defined in claim 149 wherein the step of displaying a view current recordings option further comprises the step of displaying a view current recordings screen on the user television equipment when the user selects the view current recordings option.

151. The method defined in claim 149 further comprising the step of displaying the view current recordings option on a recording options screen.

152. The method defined in claim 149 further comprising the step of displaying the view current recordings option on a remind/record screen.

153. The method defined in claim 149 further comprising the step of displaying the view current recordings option on a program guide menu screen.

154. The method defined in claim 127 further comprising the step of displaying a program recording update screen.

155. The method defined in claim 131 wherein the step of selecting a television program further comprises the step of displaying a program recording update screen.

156. The method defined in claim 150 wherein the step of displaying the view current recordings screen further comprises the step of displaying a program recording update screen.

157. The method defined in claim 154 further comprising the step of deleting a scheduled recording.

158. The method defined in claim 154 further comprising the step of updating a scheduled recording.

159. The method defined in claim 157 further comprising the step of deleting a single episode scheduled recording.

160. The method defined in claim 157 further comprising the step of deleting an entire series scheduled recording.

161. The method defined in claim 127 further comprising the step of displaying conflicting recordings.

162. The method defined in claim 127 further comprising the step of not displaying conflicting recordings if the system supports simultaneous recordings.

163. The method defined in claim 127 further comprising the step of allowing the user to resolve conflicts between scheduled recordings.

164. The method defined in claim 127 further comprising the step of allowing the system to resolve conflicts between scheduled recordings.

165. The method defined in claim 127 further comprising the step of displaying scheduled recordings and scheduled reminders on a program guide screen.

166. The method defined in claim 165 further comprising the step of displaying conflicts between recordings and reminders.

167. The method defined in claim 165 further comprising the step of not displaying conflicts between

09330792-064193

recordings and reminders if the system supports simultaneous watch and record.

168. The method defined in claim 165 further comprising the step of allowing the user to resolve conflicts between recordings and reminders.

169. A system in which television programs are displayed on user television equipment of a plurality of users comprising:

a television distribution facility configured to provide the television programs; user television equipment that receives the television programs from the television distribution facility, wherein the user television equipment and television distribution facility are configured to:

allow a user to select an option that sets program reminders for each of the programs that are part of a given series; and

automatically display individual reminders on the user television equipment of the user for each television program in that series.

170. The system defined in claim 169 wherein the user television equipment and television distribution facility are further configured to display a partial screen overlay reminder message for each television program in the series.

171. The system defined in claim 169 wherein the user television equipment and television

distribution facility are further configured to display a reminder message on a program guide display screen for each television program in the series.

172. The system defined in claim 171 wherein the user television equipment and television distribution facility are further configured to hide the reminder message.

173. The system defined in claim 170 wherein the user television equipment and television distribution facility are further configured to automatically tune to a channel that is scheduled to show the television program.

174. The system defined in claim 169 further comprising a television distribution facility for distributing the television programs to the user television equipment and for distributing television program listings to the user television equipment.

175. The system defined in claim 174 wherein the television distribution facility comprises a server on which an interactive television program guide is at least partially implemented,

176. The system defined in claim 169 wherein the user television equipment and television distribution facility are configured to allow the user to select a television program.

177. The system defined in claim 176 further configured to display a remind/record screen based on the television program selection.

178. The system defined in claim 177 further configured to display a reminder option on the remind/record screen which the user selects to set television program series reminders.

179. The system defined in claim 178 further configured to display a reminder options screen on the user television equipment when the user selects the reminder option.

180. The system defined in claim 176 further configured to display a reminder options screen on the user television equipment when the user selects the television program.

181. The system defined in claim 179 further configured to display reminder options on the reminder options screen.

182. The system defined in claim 179 further configured to display a record option on the reminder options screen.

183. The system defined in claim 169 further configured to display an option to schedule a reminder for a single episode of a series.

184. The system defined in claim 169 further configured to display an option to schedule a reminder for a given program at different lengths of time before the scheduled broadcast time of that program.

185. The system defined in claim 169 further configured to display an option to schedule a reminder for given programs which are part of the series on specific channels on which the program is to be broadcast.

186. The system defined in claim 169 further configured to display an option to schedule a reminder for given programs which are part of the series on all channels on which the program is to be broadcast.

187. The system defined in claim 169 further configured to display an option to schedule a reminder for given programs which are part of the series on specific days of the week on which the program is to be broadcast.

188. The system defined in claim 169 further configured to display an option to schedule a reminder for given programs which are part of the series on all days of the week on which the program is to be broadcast.

189. The system defined in claim 169 further configured to display an option to schedule a reminder for first-run broadcasts of given programs which are part of the series.

190. The system defined in claim 169 further configured to display an option to schedule a reminder for rerun broadcasts of given programs which are part of the series.

191. The system defined in claim 169 further configured to display an option to schedule a reminder for network broadcasts of given programs which are part of the series.

192. The system defined in claim 169 further configured to display an option to schedule a reminder for syndicated broadcasts of given programs which are part of the series.

193. The system defined in claim 169 further configured to display an option to schedule a reminder for previously unviewed broadcasts of given programs which are part of the series.

194. The system defined in claim 169 further configured to display an option to schedule a reminder for all rerun, first-run, network, syndicated, and previously unviewed broadcasts of given programs which are part of the series.

195. The system defined in claim 169 further configured to display a view current reminders option which the user selects to receive a list of current reminder orders.

196. The system defined in claim 195 further configured to display a view current reminders screen on the user television equipment when the user selects the view current reminders option.

197. The system defined in claim 195 further configured to display the view current reminders option on a reminder options screen.

198. The system defined in claim 195 further configured to display the view current reminders option on a remind/record screen.

199. The system defined in claim 195 further configured to display the view current reminders option on a program guide menu screen.

200. The system defined in claim 169 further configured to display a program reminder update screen.

201. The system defined in claim 176 further configured to display a program reminder update screen.

202. The system defined in claim 196 further configured to display a program reminder update screen.

203. The system defined in claim 200 further configured to allow the user to delete a reminder order.

204. The system defined in claim 200 further configured to allow the user to update a reminder order.

205. The system defined in claim 203 further configured to allow the user to delete a single episode reminder order.

206. The system defined in claim 203 further configured to allow the user to delete an entire series reminder order.

207. The system defined in claim 169 further configured to display conflicting reminders.

208. The system defined in claim 169 further configured not to display conflicting reminders if the system supports simultaneous reminders.

209. The system defined in claim 169 further configured to allow the user to resolve conflicts between reminders.

210. A system in which television programs are displayed on user television equipment of a plurality of users comprising:

 a television distribution facility
configured to provide the television programs;

 user television equipment that receives
the television programs from the television
distribution facility, wherein the user television

equipment and television distribution facility are configured to:

allow a user to select an option that schedules program recordings for each of the programs that are part of a given series; and

automatically record each television program in the series.

211. The system defined in claim 210 further configured to record using the user television equipment.

212. The system defined in claim 210 further configured to record using a server.

213. The system defined in claim 210 further comprising a television distribution facility for distributing the television programs to the user television equipment and for distributing television program listings to the user television equipment.

214. The system defined in claim 213 wherein the television distribution facility comprises a server on which an interactive television program guide is at least partially implemented.

215. The system defined in claim 210 further configured to allow the user to select a television program.

217. The system defined in claim 216 further configured to display a record option on the remind/record screen which the user selects to schedule television program series recordings.

218. The system defined in claim 217 further configured to display a recording options screen on the user television equipment when the user selects the record option.

219. The system defined in claim 215 further configured to display a recording options screen on the user television equipment when the user selects the television program.

220. The system defined in claim 218 further configured to display recording options on the recording options screen.

221. The system defined in claim 218 further configured to display a reminder option on the recording options screen.

222. The system defined in claim 210 further configured to display an option to schedule a recording for a single episode of a series.

223. The system defined in claim 210 further configured to display an option to schedule a recording for given programs which are part of the series on specific channels on which the program is to be broadcast.

224. The system defined in claim 210 further configured to display an option to schedule a recording for given programs which are part of the series on all channels on which the program is to be broadcast.

225. The system defined in claim 210 further configured to display an option to schedule a recording for given programs which are part of the series on specific days of the week on which the program is to be broadcast.

226. The system defined in claim 210 further configured to display an option to schedule a recording for given programs which are part of the series on all days of the week on which the program is to be broadcast.

227. The system defined in claim 210 further configured to display an option to schedule a recording for first-run broadcasts of given programs which are part of the series.

228. The system defined in claim 210 further configured to display an option to schedule a recording for rerun broadcasts of given programs which are part of the series.

229. The system defined in claim 210 further configured to display an option to schedule a recording for network broadcasts of given programs which are part of the series.

230. The system defined in claim 210 further configured to display an option to schedule a recording for syndicated broadcasts of given programs which are part of the series.

231. The system defined in claim 210 further configured to display an option to schedule a recording for previously unrecorded broadcasts of given programs which are part of the series.

232. The system defined in claim 210 further configured to display an option to schedule a recording for all rerun, first-run, network, syndicated, and previously unrecorded broadcasts of given programs which are part of the series.

233. The system defined in claim 210 further configured to display a view current recordings option which the user selects to receive a list of current scheduled recordings.

234. The system defined in claim 233 further configured to display a view current recordings screen on the user television equipment when the user selects the view current recordings option.

236. The system defined in claim 233 further configured to display the view current recordings option on a remind/record screen.

237. The system defined in claim 233 further configured to display the view current recordings option on a program guide menu screen.

238. The system defined in claim 210 further configured to display a program recording update screen.

239. The system defined in claim 215 further configured to display a program recording update screen.

240. The system defined in claim 234 further configured to display a program recording update screen.

241. The system defined in claim 238 further configured to allow the user to delete a scheduled recording.

242. The system defined in claim 238 further configured to allow the user to update a scheduled recording.

243. The system defined in claim 241 further configured to allow the user to delete a single episode scheduled recording.

244. The system defined in claim 241 further configured to allow the user to delete an entire series scheduled recording.

245. The system defined in claim 210 further configured to display conflicting recordings.

246. The system defined in claim 210 further configured not to display conflicting recordings if the system supports simultaneous recordings.

247. The system defined in claim 210 further configured to allow the user to resolve conflicts between scheduled recordings.

248. The system defined in claim 210 further configured to allow the system to resolve conflicts between scheduled recordings.

249. The system defined in claim 210 further configured to display scheduled recordings and scheduled reminders on a program guide screen.

250. The system defined in claim 249 further configured to display conflicts between recordings and reminders.

means for implementing an interactive television program guide;

means for displaying the television
program listings;

means for automatically determining with the interactive television program guide whether the selected program is part of a series; and

means for recording each television program in the series.

Abstract of the Disclosure

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An interactive television program guide system with program series reminder and recording capabilities is provided. The system allows a user to

5 set a reminder or schedule a recording for a single episode or for each episode of a program series. In addition, other options may be provided that allow the user to determine, for example, whether to schedule reminders/recordings for episodes on all channels on

10 which the program airs or only on a selected channels, whether to schedule reminders/recordings for all episodes including reruns or only new episodes, whether to schedule reminders/recordings for network or syndicated episodes, and whether to schedule

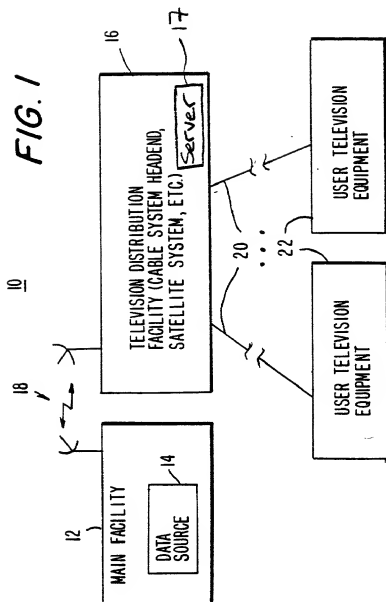
15 reminders/recordings for episodes on all days or only on selected days of the week. Before the scheduled broadcast time of each episode of each selected program series, the system sends a reminder message to the user that reminds the user of the program episode or sends a

20 record command to a videocassette recorder to initiate recording of the episode. The system allows a user to view a list of all currently requested program reminders and scheduled program recordings. The user may update, change, or cancel any entry in either list

25 or the system may automatically update the lists to

match new broadcast schedule information. If the user sets a reminder or schedules a recording that conflicts with an existing reminder or recording, the system may inform the user of the conflict and allow the user to
5 resolve the conflict or the system may resolve the conflict.

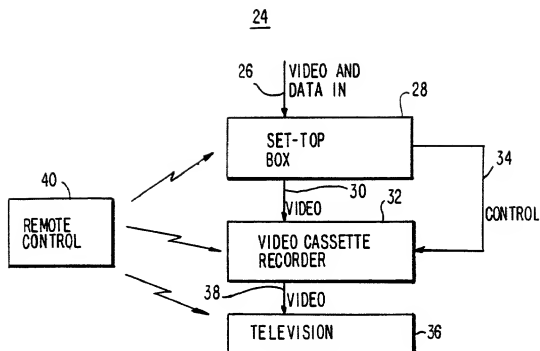
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UV-56

UV-56

FIG. 2



UV-56

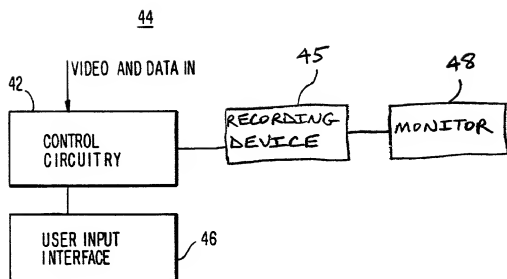


FIG. 3

UV-56

FIG. 4

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	76	70	70	
77	6:35PM JULY 9, 1997	6:30 PM	7:00 PM	7:30 PM
52	2 KJRH	PROGRAM 1		PROGRAM 2
54	3 HBO	PROGRAM 1	PROGRAM 2	
56	4 NBC	PROGRAM 1	SEINFELD	PROGRAM 3
58	5 FOX	PROGRAM 1	PROGRAM 2	PROGRAM 3
	68	74		

72

57

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FIG. 5

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	6:35PM JULY 9, 1997	6:30PM	7:00PM	7:30PM
54 →	3 HBO	PROGRAM 1	PROGRAM 2	
56 →	4 NBC	PROGRAM 1	SEINFELD	PROGRAM 3
58 →	5 FOX	PROGRAM 1	PROGRAM 2	PROGRAM 3
55 →	7 ABC	PROGRAM 1	PROGRAM 2	

59

58

66

66

00330792.064199

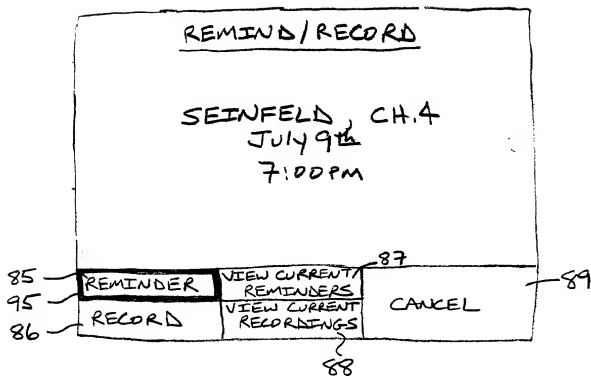
70

FIG. 6

90

91	SEINFELD (0:30), CH. 4, 7:00PM		JUL 19, 1997
92	REMINDER OPTIONS Schedule Reminder For: <input type="radio"/> This episode <input checked="" type="radio"/> Entire Series		
95	Program channels: <input type="radio"/> This channel <input type="radio"/> All channels		
93	How soon before event do you want to be reminded? <input type="radio"/> 3 Minutes (1-15) <input type="radio"/> Other		
94	OK	CANCEL	Program days: <input type="radio"/> This day <input type="radio"/> All days
			Program type: <input type="radio"/> First-run program <input type="radio"/> Network syndicated <input type="radio"/> Unviewed only
		RECORD	VIEW
		CURRENT REMINDERS	

96

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FIG. 7

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How Soon Before Event Do You Want To Be Reminded?		
<input type="radio"/> 1 Hour	<input type="radio"/> Days: _____	
<input type="radio"/> 1 Day	<input type="radio"/> Hours: _____	
<input type="radio"/> 2 Days	<input type="radio"/> 15 Minutes: _____	
	117	119
	ENTER	EXIT

FIG. 8

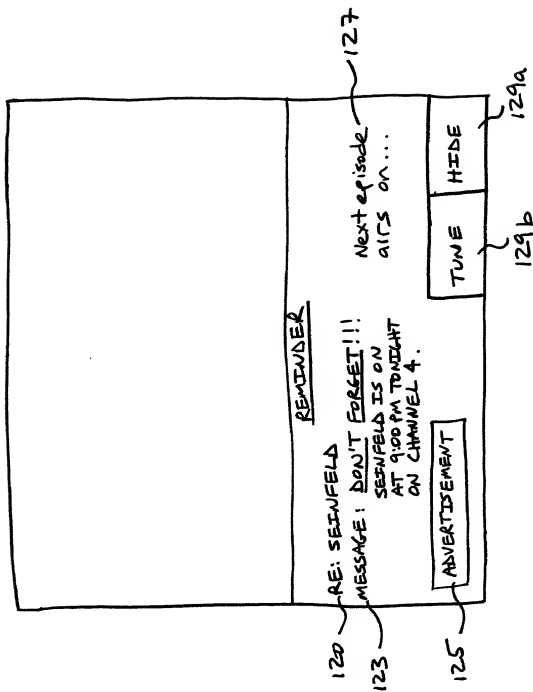


FIG. 9

130

CURRENT REMINDERS			
PROGRAM	EPISODES	REMINDER	SUBMITTED
135 SEINFELD	JUN 9, 1997 CH 4, 7:00 PM	1 HOUR BEFORE; RERUN	JULY 5, 1997 AT 3:04 PM
131 THIS WEEK WITH SAM & CORIE	SERIES: SUNDAY, JUN 10 10:30 AM, CH 7	1 DAY BEFORE; NEW (first-run)	JULY 8, 1997 AT 5:09 PM
SEINFELD	JULY 14, 1997 CH 11, 11:00 PM	1 HOUR BEFORE; RERUN	JULY 9, 1997 AT 5:03 PM
134 THIS WEEK WITH SAM & CORIE	SERIES: SUNDAY, JULY 17 10:30 AM, CH 7 JULY 24	1 DAY BEFORE; NEW (first-run)	JULY 8, 1997 AT 5:09 PM
	132 → 138		139
137 VIEW CURRENT RECORDINGS	CANCEL	EXIT	

FIG. 10

135

SEINFELD(0:30), CH.4, 7:00PM		JUL 19, 1997	
UPDATE REMINDER		PROGRAM CHANNELS:	
UPDATE REMINDER FOR: <input type="radio"/> This episode <input checked="" type="radio"/> Entire series		<input type="radio"/> This channel <input type="radio"/> All channels	
How soon before event do you want to be reminded? <input type="radio"/> Minutes <input type="radio"/> Other (1-15)		PROGRAM DAYS: <input type="radio"/> This day <input type="radio"/> All days	
<input type="radio"/> First-run <input type="radio"/> Network <input type="radio"/> Unviewed only		PROGRAM TYPE: <input type="radio"/> First-run <input type="radio"/> Network <input type="radio"/> Unviewed only	
OK	CANCEL SERIES REMINDER	CANCEL CURRENT EPISODE REMINDER	EXIT

132

95

121

124

112

111

FIG. 10a

140

SEINFELD (0:30) CH.4, 7:00PM		JUL 9, 1997	
<u>RECORDING OPTIONS</u>			
Schedule Recording For:		Program channels	
<input type="radio"/> This episode <input checked="" type="radio"/> Entire Series		<input type="radio"/> This selected Channel <input type="radio"/> All channels	
		Program days:	
		<input type="radio"/> This day <input type="radio"/> All days	
		Program type:	
		<input type="radio"/> First-run program <input type="radio"/> Network <input type="radio"/> On-record only	
OK	CANCEL	REMINDER	CURRENT RECORDINGS

142 95 144 145 146 147 143 148 149

FIG. 11

170

CURRENT RECORDINGS			
PROGRAM SEINFELD	EPISODES JULY 9, 1997 CH 4, 7:00 PM (RE-RUN)	SUBMITTED JULY 5, 1997 at 3:04 PM	
THIS WEEK WITH SAM + COOKE	ENTIRE SERIES: SUNDAYS 1CH 7 10:30 AM (First-run) JULY 10 JULY 17	JULY 8, 1997 at 5:09 PM	
VIEW CURRENT RECORDINGS	CANCEL	EXIT	

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FIG. 12

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SEINFELD (0:30), CH. 4, 7:00PM		July 9, 1997
UPDATE RECORDING		
Program channels: <input type="checkbox"/> This channel <input type="checkbox"/> selected <input type="checkbox"/> All channels		
Program days: <input type="checkbox"/> This day <input type="checkbox"/> selected days <input type="checkbox"/> All days		
Program type: <input type="checkbox"/> First-run <input type="checkbox"/> rerun <input type="checkbox"/> All <input type="checkbox"/> Network <input type="checkbox"/> syndicated <input type="checkbox"/> Unrecorded only		
OK	CANCEL SERIES Recording	CANCEL CURRENT EPISODE Recording
174		175
		EXIT
		176

FIG. 12a

180

181 CURRENT REMINDERS				183
PROGRAM	EPISODES	REMINER	SUBMITTED	
X	May 3, 1997 Monday Ch. 4, 8:00pm	1 hr before REUN	May 1, 1997 at 1:30pm	CONFLICT
Y	SERIES: Mondays Ch. 7, 8:00pm	.	.	CONFLICT
Z	May 3, 1997	.	.	
Y	May 9, 1997 Ch. 11, 9:00pm			
	SERIES: May 10, 1997 May 17, 1997			
VIEW CURRENT RECORDINGS	CANCEL		EXIT	

FIG. 13

190

CURRENT RECORDINGS		
PROGRAM	EPISODES	SUBMITTED
X	May 3, 1997 Monday CH. 4, 8:00pm	May 1, 1997 at 1:30pm
Y	SERIES: Mondays CH. 7, 8:00pm May 3, 1997	May 2, 1997 at 5:00pm
Z	May 9, 1997 CH. 11, 9:00pm	
Y	SERIES May 10, 1997 May 17, 1997	
		CONFLICT
		CONFLICT
		Resolve Conflicts

FIG. 14

210

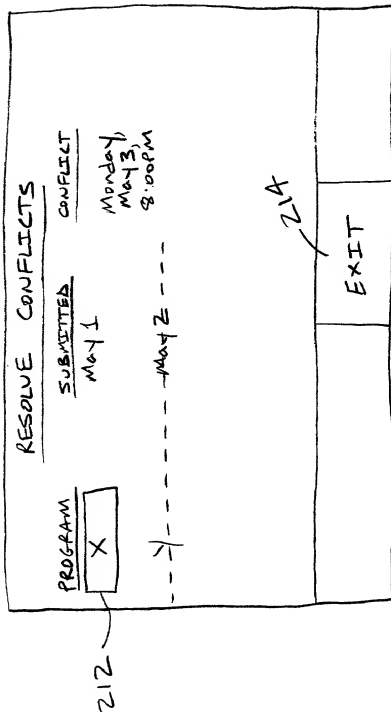


FIG. 15

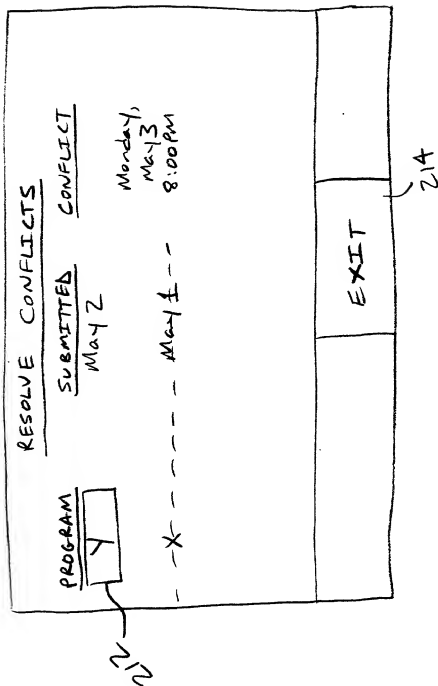


FIG. 1b

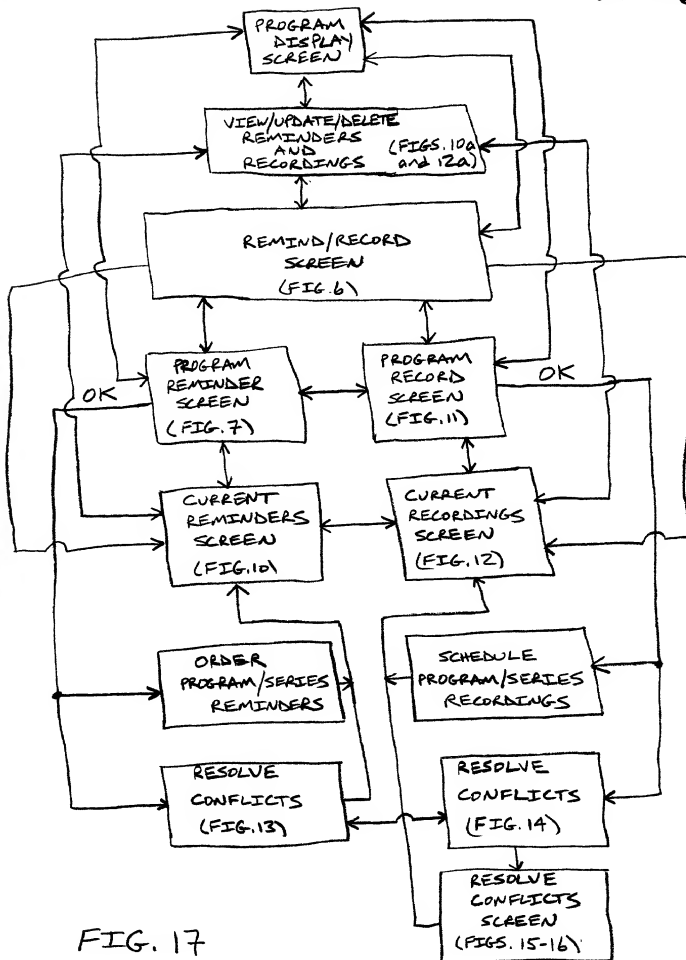


FIG. 17

00000792.06130

DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name;

I believe I am an original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

SERIES REMINDERS AND SERIES RECORDING FROM
AN INTERACTIVE TELEVISION PROGRAM GUIDE

the specification of which

☒ [X] is attached hereto

☐ [] was filed on _____ as
Application Serial No. _____.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims.

I do not know and do not believe that the invention was ever patented or described in any printed publication in any country before my or our invention thereof or more than one year prior to this application.

I do not know and do not believe that the invention was in public use or on sale in the United States of America more than one year prior to this application.

I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known by me to be material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, § 119(a)-(d) of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having

a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s)

Priority
Claimed

<u>(Number)</u>	<u>(Country)</u>	<u>(Filing Date)</u>	<u>[] []</u>
			<u>Yes No</u>

I hereby claim the benefit under Title 35, United States Code § 119(e) of any United States provisional application(s) listed below.

<u>60/088,888</u>	<u>June 11, 1998</u>
(Application Serial No.)	(Filing Date)

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known by me to be material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

<u>(Application Serial No.)</u>	<u>(Filing Date)</u>	<u>(Status) (patented, pending, abandoned)</u>
---------------------------------	----------------------	--

As a named inventor, I hereby appoint the following attorneys or agents to prosecute this application and transact all business in the United States Patent and Trademark Office connected therewith:

<u>Robert C. Morgan, Reg. No. 30,199</u>
<u>G. Victor Treyz, Reg. No. 36,294</u>

Send correspondence to: G. Victor Treyz
FISH & NEAVE
1251 Avenue of the Americas
New York, New York 10020-1104

Direct telephone calls to: G. Victor Trevz
(212) 596-9000

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of first inventor Edward B. Knudson

First Inventor's signature _____ Date _____

Residence 11055 West Rowland Avenue, Littleton,
Colorado 80127
Citizenship United States
Post Office Address 11055 West Rowland Avenue,
Littleton, Colorado 80127

Full name of second inventor Thomas R. Lemmons

Second Inventor's signature _____ Date _____

Residence Route 2, Box 1178, Sand Springs, Oklahoma
74063
Citizenship United States
Post Office Address Route 2, Box 1178, Sand Springs,
Oklahoma, 74063

Full name of third inventor Kevin D. Satterfield

Third Inventor's signature _____ Date _____

Residence 102 Elk Ridge Drive, Mannford, Oklahoma
74044

Citizenship United States

Post Office Address 102 Elk Ridge Drive, Mannford,
Oklahoma 74044

Full name of fourth inventor Donald W. Allison

Fourth Inventor's signature _____ Date _____

Residence 3411 South 132nd East Avenue, Tulsa, Oklahoma
74134

Citizenship United States

Post Office Address 3411 South 132nd East Avenue,
Tulsa, Oklahoma, 74134

Full name of fifth inventor Michael D. Ellis

Fifth Inventor's signature _____ Date _____

Residence 1300 Kingwood Place, Boulder, Colorado 80304

Citizenship United States

Post Office Address 1300 Kingwood Place, Boulder,
Colorado 80304